No. 3382

United States
Circuit Court of Appeals

For the Ninth Circuit

NORTHERN IDAHO AND MONTANA POWER COMPANY, a Corporation,

Plaintiff in Error,

vs.

A. L. JORDAN LUMBER COMPANY, a Corporation,

Defendant in Error.

Upon Writ of Error to the United States District Court of the District of Montana

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Brief of Plaintiff in Error

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Brief of Plaintiff in Error

By this Writ the plaintiff in error seeks to reverse a judgment entered in a law action in the United States District Court, District of Montana, wherein the defendant in error A. L. Jordan Lumber Company was plaintiff and the plaintiff in error, Northern Idaho & Montana Power Company was defendant. A jury was waived and the case was tried by the Court. The Court ren-

dered an opinion (R. p. 146) in which is embraced findings of fact. While this Writ challenges certain findings of the Court for the reason that the same are not supported by the evidence, it is mainly based on the assignment that on the facts found by the court supplemented by the undisputed evidence, the judgment should have been for the defendant in the District Court.

For brevity we will call the defendant in error the "Mill Company," and the plaintiff in error the "Power Company."

The action was brought for damages resulting from the complete destruction by fire of the Mill Company's plant on Christmas morning, shortly after midnight, 1916.

The plant had been used for several years in the manufacture of doors, sash, interior finish and similar products. A wooden one story building 44x55 feet, a wing 20x70 feet and a "lean-to" 20x26 feet contained various articles of woodworking machinery, finished stock and stock to be worked. The machines had the usual accessories of blow-pipes and were driven by electric motors. The plant was located adjacent to the right-of-way on the north side of the main line of the Great Northern Railroad which runs at that place approximately east and west. (R. p. 22.) The night was cold. The ground was covered with snow. A strong northeasterly wind was blowing. A transcontinental Great Northern train westbound passed

at 11:20. The Great Northern station near the mill was closed shortly after and the operator went to bed. The dispatcher frequently turned away from the depot tramps and hoboes but does not remember whether he did so that night. The mill was not in operation on Sunday the 24th. Mr. Jordan was there about one o'clock. On leaving he locked the doors but did not examine the windows. The watchman left the building at seven o'clock on the morning of the 24th. He left the outside doors fastened. At that time there were hot ashes in the stove but no coals to speak of. Dust had accumulated in the mill during its six years' continuous prior operation. The windows were not inspected to see if they were securely fastened. (R. p. 29.)

The Power Company installed and maintained a three wire, three phase supply line leading from the high voltage sub-station in the village of Columbia Falls approximately one mile away terminating at a bank of three 30 K. W. transformers mounted about twelve feet high on cross arms extending between two poles forty-eight feet from the mill (R. p. 22). From these transformers the power line consisting of two wires extended into the mill where there was a cabinet containing a main line switch, and from that cabinet to seven motors each having individual switches. The light line tapped off at the low or secondary side of one of the transformers to which incandescent lamps

within the mill were attached. This light line extended into an adjacent cottage. Mr. Jordan before leaving the mill on Sunday observed that the main switch controlling the power line was open but the switch to the light line was closed. The wires of the light line inside the mill were contained in metal tubes or conduits. All the wiring within the mill and the light line leading to the adjacent cottage was installed and cared for by the Mill Company. Some time before the fire an electrical inspector for the fire underwriters, inspected the mill and ordered changes made in the electrical system. The making of these changes was turned over to Stiles, a witness on the trial, an employe of the Mill Company who, though not an electrician, undertook to carry on the work under the direction of the fire underwriters' inspector. This inspector, Mr. Mills, condemned the whole system and ordered that it be taken out at an early date. The conduit system which the inspector had ordered installed had been mainly put in but was not completed at the time of the fire. (R. p. 49.) The conduits in which the light wires ran had no metallic ground. Mr. Stiles says:

> "This was an uncompleted job. We were working on them at odd times. It was started some year or so before and I put it in as I had time. All the conduits in the lighting system within the mill were not in—most of them were."

Sub-division F, Rule 28, page 65 provides:

> "F. Must have the metal of the conduit permanently and effectually grounded to water-piping, gas-piping or other suitable grounds; provided that when connections are made to gas-piping, they must be on the street side of the meter."

This was not done. (R. p. 98.)

It thus appears that the work of remodeling the condemned lighting system inside the mill was not completed and that the metal conduits, were not grounded in accordance with the underwriters' rules for protection against fire. The testimony of Clingerman and Dow, not contradicted, is that the grounding of conduits has been since 1903 recognized by electricians as and is a necessary protection of light lines against fire hazard where the wiring is in conduits. (R. p. 125 and 139.)

The system was working satisfactorily and nothing occurred in the operation to indicate any disorder in the electrical apparatus down to the time of the fire. The voltage on the light wire fell when the motors were on so that lights became somewhat dim and a flat iron used in the adjacent cottage would not heat up satisfactorily. When the motor switch was off and the motors not running the iron became overheated and the lights brightened at times to the point of failure by reason of increased voltage. The expert witnesses, however,

all agree that this variation of voltage in the light line did not indicate any structural disorder. Mr. Kimmel, the Mill Company's expert, said he would not attach any importance to this variation of voltage—that it was just what he would expect at a plant located at the end of a line. He says:

> "I would not attribute to the variation of the light and heating of the iron to any disorder in the system." (R. p. 84.)

Mr. Clingerman explains on pp. 122 and 123 this variation of voltage in the light line attributable to the turning on and off of the motors, illustrating by a comparison with the varying pressure of water in a house supply where one spigot is running and then several more are turned open thereby decreasing the pressure and again increasing when all are closed except one. (R. p. 123.) Mr. Dow says the action of this flat iron and the lights is universal in installations of that kind. (R. p. 137.)

The only suggested defect in the apparatus prior to the fire sustained by any testimony, was in a lightning arrester located about two hundred feet from the mill. Three lightning arresters were installed on the poles at this point, each having a metallic connection with the supply wires carrying the 2200 volt pressure to the transformers. It is the function of these lightning arresters to carry off any excess shocks such as would

be occasioned by lightning striking the wire. Prior to the fire there was nothing to indicate any disorder in these lightning arresters. There is no testimony to show that they had not been properly inspected. According to custom lightning arresters are usually inspected about once a year, generally in the spring. (R. p. 84.) About a month after the fire Utter, a witness for the Mill Company, at the time engaged in reconstructing the plant, and Stiles, who had had charge of the electrical installation before the fire, inspected these lightning arresters. Stiles says:

> "I saw there had been a charge through the lightning arrester, and that the cylinders were melted and pitted and in a smoky condition." (R. p. 52.)

> "It seems that the first cylinder and the second one—that is the whole block had been dropped and the first cylinder had been suddenly jammed close to the second one and from there on they were equally spaced all right * * *. The cylinder, as well as I can remember, was suddenly dropped so that it had struck the floor or some other object, and was suddenly jammed against this one so that there was no air gap between them. The third cylinder indicated that lightning had gone through it to ground. To test the lightning arrester we used a small transformer and put it in connection with the line on both ends, stepping 110 volts to 2000 volts and she skipped through and continued to work—continued

to circuit. That indicated that the lightning arrester was in bad condition." (R. p. 47.)

These witnesses placed the lightning arresters back on the poles. They were subsequently taken down by employes of the Power Company, stored away and brought into court. The witnesses who took them down stored them and brought them into court testified that there was no change in their condition from the time they took them down. From an inspection of these lightning arresters in court it appeared that one of them had been subjected to a stroke of lightning. Mr. Kimmel, the Mill Company's expert, testified:

> "As that lightning arrester is now, it appears that it would perform its functions." (R. p. 74.)
>
> "As it now is, I believe that lightning arrester will work all right, that is, it would probably perform its functions. Of course we cannot look into the inside of these carbons, but I think that it would carry the current around and not interrupt the flow of current. I cannot say that this particular lightning arrester would leak much current in the condition it is in." (R. p. 55.)

The lightning arrester consists of a series of brass cylinders about half an inch long, a quarter of an inch in diameter inserted in a porcelain back. These cylinders are normally set so as to allow an air space between them; a little greater than the thickness of an ordinary piece of paper. A wire ex-

tends from the main conducting wire to the top of this row of cylinders and another wire from the last cylinder to the ground. The air space between the cylinders has the effect of insulating one from the other except under unusual voltage when the current will pass from one cylinder to the other arcing through the space between them. This arcing causes what is termed "blistering" and discoloration of the cylinders. It is not contended that an electrical current would throw these cylinders out of place or in any way have the effect of closing the air gaps between them. A displacement which would close the air gaps would necessarily be the result of some force other than electrical. The witness Stiles has attributed the displacement, if one existed, to a fall. These arresters had been on the poles from the time the plant was installed, encased in wooden boxes. It is difficult to say how the cylinders could have become displaced. There is no attempt to explain how or when they became displaced. It is just as fair to suppose that the displacement occurred in the period after the fire and before this inspection by Stiles and Utter, about a month, while the premises were practically vacant, as to suppose that the displacement occurred before. According to the testimony of Utter if the displacement of the cylinders occurred before the fire it would have an effect upon the operation of the machinery. (R. p. 38.) No such effect is shown.

The hypothesis that this lightning arrester was out of order at the time of the fire is a remote inference rebutted by the normal action of the apparatus up to that time, but, as we shall show later, even though this lightning arrester was in the condition described by Stiles prior to the fire, and even though that condition ought to have been discovered by reasonable inspection, (which is distinctly negatived by the testimony of Kimmel and not supported by the testimony of any witness), this lightning arrester in good or bad condition, had nothing to do with the cause of the fire.

The fire was discovered about 12:10 by the Great Northern telegraph operator and about the same time by a woman residing in the cottage adjacent to the mill. At that time the entire interior of the mill was ablaze so that it is impossible to locate any point where it started.

The complaint charges that the defendant (the Power Company) did not discharge its duties.

> "but in violation of its said duties carelessly, negligently and unskillfully wired said premises, and carelessly, negligently and unskillfully installed said electrical apparatus and appurtenances, and carelessly and negligently failed to keep and maintain the same in good repair, and carelessly and negligently permitted the said electrical apparatus and fixtures to become worn, damaged and defective, all of which was well known to the defendant, its agents, and employes; and by reason of said carelessness and negligence, such great voltage

> or load of electricity was carried to and upon the wires upon and within the premises of the plaintiff, and by reason of said excessive voltage and overloading of wires, and without any fault of the plaintiff, the said building, contents and property of the plaintiff * * *"

were destroyed.

These allegations were all denied by the answer.

The plaintiff assumed the burden of proof upon the issue charging that the proximate cause of the fire was "great load or voltage of electricity" carried to and upon the wires in the mill. It voluntarily tendered the issue that *it was free from fault.* In the view of the case taken by the District Court it becomes important to note that the plaintiff alleged that it was "without any fault" which allegation the defendant denied thereby creating an issue of fact just as effectually as the issue would have been created by the defendant charging that if the fire was electrical in origin it occurred through the contributing fault of the plaintiff. The District Court found as a matter of law that he could not consider the confessed contributory negligence of the plaintiff because the defendant had not pleaded contributory negilgence. The complaint lays the cause of the fire in an overload of the secondary wires. The answer denies an overload. This was the primary issue on which the trial court found with the

defendant. But disregarding the issue made up by the pleadings the District Judge found that the Power Company and the Mill Company by concurrent negligent acts burned the mill by some other means, each contributing to the result.

We claim that it was error in the District Court to decide the case upon a new issue without amendment and without notice and at the same time hold that we are barred from the benefit of the facts proved by the plaintiff, which if pleaded, would defeat a recovery.

When the plaintiff failed to support the fundamental allegation of its pleading the case should be dismissed, or if tried on a new issue without new pleadings should be decided on the evidence.

ARGUMENT

Was the fire of electrical origin?

If of electrical origin, was the fire attributable to any of the apparatus installed and maintained by the Power Company?

If the fire was attributable to any part of the apparatus installed and maintained by the Power Company was the defect in the apparatus so installed the proximate cause of the fire or merely a condition which made defective apparatus installed by the Mill Company an operative and proximate cause?

If there was any defect in the apparatus installed by the Power Company, how long had the defect been in existence and was there any negligence in failing to discover its existence?

The Mill Company having failed to prove that the wiring on its premises was overloaded by a current of an excess voltage as charged in the complaint, and having shown that the apparatus in the mill was defective and required overhauling, which work was in progress but was not being done in the manner required to protect against fire hazard, and having shown that in order to start an electrical fire there must have been on its premises and under its control one accidental ground which was a fire hazard, and the fire was attributable to this accidental ground acting in conjunction with either another accidental ground in the apparatus of the Power Company or another accidental ground in its own apparatus, (two accidental grounds being necessary to a fire), does not the hypothesis of an electrical fire find its support either in the contributing negligent acts and omissions of both parties or wholly in the negligence of the plaintiff?

The District Court found that the fire was of electrical origin because no other source of origin has been proved. We submit that aside from the mere presence of a 110 volt electric lighting potential inside the mill there is nothing to lead to the conclusion that electricity had anything to do

with the origin of this fire. The power line was dead. It had been cut off at the main switch. There were no lights in the mill. The occupant of the cottage had gone to bed more than an hour before and had put out all her lights so that there was no current on the light line, merely a potential, by which is meant the presence of conditions to start a current upon establishing connections between the positive and negative wires.

It is important to bear in mind that this lighting current originates in the low or secondary side of the transformer.

As explained by Mr. Kimmel, with the aid of Exhibit 3, beginning at page 56, the transformer consists of two compartments each enclosed in chambers so effectually insulated from each other that there is no leak of the electric current from one to the other. A transformer may be compared to two cells in a dungeon, the walls of which are absolutely impenetrable. The force operating in one cell or chamber induces a corresponding force in the other cell. This induced force results in an independent current of electricity leading to and from what is known as the secondary cell. The current, therefore, leading into, through and out of the primary cell is entirely independent of the current leading from the secondary side out through the lighting wire, the lights and other apparatus attached and back into the secondary side. As long as there is no puncture of the cell walls, or

defect in the apparatus resulting in an arc around the chambers of the transformer, there is no possibility of overloading the low voltage system to which lights are attached and the low voltage to which the motors when running are attached from the high voltage current leading into the opposite or primary side of the transformer.

The electric power flowing in the primary circuit of a transformer is transferred to the secondary circuit and thence out of the transformer to the point of use by magnetism circulating in the iron core of the transformer. A comparison is a steam boiler in which the heat energy from the fire is transferred into heat energy in the steam through the iron shell and tubes of the boiler, there being no actual contact between the flame and the steam.

Mr. Jordan, manager of the Mill Company, told his experts Kimmel and Utter that when he arrived at the premises there were two separate simultaneous fires, one was consuming the mill, the other burning the transformer. (R. p. 66.)

From this, these experts drew the inference that the fire in the transformer was the result of internal electrical disorder. This inference was shown by positive testimony to be wrong and the testimony of Mr. Jordan was found by the Court untrue.

The hypothesis of a disordered transformer based on impeached testimony and finally dis-

carded by the trial judge was the foundation on which this Mill Company's case was built.

Upon this hypothesis experts Kimmel and Utter constructed the theory that the primary high voltage current, in place of stopping at the transformer, had found its way through a puncture or some other disorder into the light wiring which became overloaded, and finally found an outlet to the ground through the blower-pipes or some other high resistance conductor by means of which heat would be generated or a spark would be caused. Having found the earth the current would take the course of least resistance in its effort to get back to the primary line, which might be through the defective lightning arrester, a tree or any accidental connection between the earth and a primary wire.

This was their case. Its foundation rests upon the hypothesis that the transformer had broken down. The only basis for the hypothesis was the testimony of Mr. Jordan, President of the Mill Company. Mr. Jordan says that at about 12:10 he was notified in his residence of the fire. He had a mile to travel. The wind was blowing thirty-five miles an hour in his face. The snow was two feet deep. When he arrived the fire was blazing all over the mill and material was falling in. He could not look in the windows for the blaze inside. (R. p. 28.)

> "When I saw this transformer on fire, oil was bubbling out and burning. The transformer was about forty-eight feet from the building. Flames extended over from the building towards the transformers. The wind was blowing from that direction." (R. p. 30.)

A transformer is enclosed within a cast iron case. This case was filled with oil, which became hot, bubbled over and burned. This is the sole testimony on which the Mill Company's experts base their hypothesis that the transformer had broken down. We submit that the testimony, if standing alone, would in no way tend to support the hypothesis, but the testimony does not stand alone. One of the poles to which the cross arms supporting these transformers were fastened burned down (it was burning when Jordan got to the mill). This allowed the transformers to drop to the earth. The wires were then cut by one of the Power Company's employes and the transformers lay on the ground at the place for more than a month. Kimmel, the Mill Company's chief expert, had visited the premises. Utter, whose industry in tracing the cause of the fire led him to take down the lightning arrester was there. Stiles, who had charge of the interior wiring, was there. The case of one of the transformers was broken by its fall to the ground but none of them saw fit to make an examination to see if there was a breakdown or any other defect in any of these trans-

formers on which their hypothesis touching the origin of this fire rested. The Power Company, not in anticipation of any law suit, or not in the course of preparation against the possibility of a law suit, but solely because it had use for the transformers, employed an independent contractor, Arthur Moseby, whose testimony will be found at pages 100 to 110 of the Record, to test out these transformers. He did test them out under a pressure of 4000 volts—almost double the normal voltage, and found no leak or any other kind of defect. He examined them critically to see if there was any evidence of electrical arcing and found none. One of these transformers was placed in service and the other two in the Power Company's warehouse. After this law suit started the Mill Company's employes and experts were invited to test them out. There had been no change whatever in the structure of the apparatus. Kimmel was there; Utter was there, but neither of them saw fit to make a test. Moseby's testimony is supported by that of Grant and McDonald, employes of the Power Company. Mr. Dow, chief electrical engineer of the Montana Power Company, and Mr. Clingerman, chief electrical engineer of the defendant Power Company, both testified that the tests made by Moseby in the presence of Grant and McDonald would have revealed any defect in these transformers. The Court has found that there was no defect or other breakdown in the transformers.

The Court says:

"So far as plaintiff counts upon a defective transformer it has failed. The evidence does not persuade that the transformer was in any way defective. The complaint filed two months after the fire, contained only a "catch-all" charge of defective instrumentalities. Immediately after the fire plaintiff instituted investigation to fix liability upon defendant. Its manager testified he saw the transformer on fire indicating fire within it. But though these transformers fell to the ground by reason of their wires and poles burned by the mill fire, neither he nor any of his searchers for evidence even thought to examine them as they lay upon the ground, much less to test them, but passed them by, so they say, to examine and test the arresters. There and elsewhere they saw these transformers repeatedly, and yet they at no time did more than "casually" look at them. No other witness of several at the fire saw the transformer on fire. Plaintiff's principal expert on the scene early to sell motors, etc., to plaintiff, discussed the fire with the manager, but did not conclude that the fire was due to the current until over a year later when he heard an employe of defendant's say the transformer was on fire and another employe say one coil had been removed. It is inconceivable had the manager seen the transformer on fire within, that he would not have told his searchers and expert, and first proceeded to thorough examination and test of the transformer. It is apparent the said expert had no inkling of it until he heard the said employes as aforesaid. From all they knew and saw, plaintiff's witnesses doubtless concluded the mill fire alone had affected the transformer, until after the em-

> ployes' statements aforesaid. The charred appearance of the transformer, dragged from one of plaintiff's witnesses at the very end by gross leading, is more likely due to the mill fire.
>
> "The manager at the fire was not likely giving serious attention to the transformer. He could now easily confuse a pole afire or even oil boiling out and burning from the mill fire, with fire within the transformer." (R. pp. 149, 150.)

There is no real conflict of testimony, but if there was the Court's conclusion on this important fact should be given in this Court the same weight as would be given to the special finding of a jury.

When we eliminate the hypothesis that there was a breakdown in the transformer, the conclusion of Utter and Kimmel, that the fire was of electrical origin, is without support. Both of these witnesses sought to charge responsibility on the Power Company for the consequences of a breakdown in the transformer. Some electrical engineers claim that the secondary or low voltage side of a transformer should be connected with the earth by a low resistance metallic conductor—a wire is usually employed. This is called grounding the transformer. The function of this transformer ground is to carry away any current which might find its way through the transformer from the high side to the low side by reason of a breakdown. The grounding of a transformer in this way is

a protection against the consequences of an accidental breakdown. Accidental breakdowns are for the most part unavoidable and it is not claimed by these experts that the Power Company would be responsible for the consequences of an accidental arcing within the transformer attributable to some defect which might develop in that instrument, but to make their case it was contended that there was negligence in not providing safety means against the possibility of an accident to the transformer. Clingerman and Dow, the electrical experts for the Power Company, testified that such a ground wire on the low side of the transformer would have a tendency to increase the fire hazard while it would decrease the hazard of personal injury, and that therefore it was the usual practice to install a ground wire as a protection of persons coming in contact with the light lines, motors and other apparatus in case of a breakdown in the transformer. The record contains much discussion relating to the desirability of such a ground wire at the low side of a transformer, but all this testimony is of no consequence in view of the finding of the Court supported by the overwhelming preponderance, if not the uncontradicted testimony that the transformer did not break down but was in perfect order.

The experts for the Mill Company attempted to fasten responibility upon the Power Company for the breaking down of the transformer by claim-

ing that the defective lightning arrester may have been responsible for the breakdown. Throughout their case they make a disordered transformer the active agent in causing the fire. Utter, while not so clear as Kimmel, connects this so-called defective lightning arrester with the fire, but he is clear upon the point that it could have had no connection with the fire unless there was a defect in the transformer. He says:

> "I should say it would be pretty near necessary for there to be a defect in the transformer if the system worked before. * * * It is liable to cause an excessive current." (R. p. 38.)

Kimmel's testimony is all based upon the assumption that the transformer was on fire and that the fire in the transformer was independent of the fire in the mill; that the fire in both the transformer and the mill was caused by an arcing of the high voltage to the low voltage wires. He says:

> "Well, the transformer was described to be afire at the same time the mill was afire, and in addition to that, there were two simultaneous fires. One in the transformer and one in the mill. That, to my notion, would tend to make me believe that an arc through the one caused the fire in the other. An arc through the transformer caused the fire in the mill." (R. pp. 66, 67, 86, 87.)

The hypothesis on which Kimmel's conclusion is based having failed the conclusion fails also. Mr. Kimmel's thought seems to be that if the high voltage current was leaking through the transformer to the low voltage wiring this defective lightning arrester would afford one connection between the high voltage wires and the earth and a second connection might be established between the overloaded light wire and the earth through the blowpipes or through machinery in the mill and that this second connection, being what is known among electricians as an accidental ground, would not be a perfect conductor and on that account there would be liability of heating or sparking. Where two members of the line were not in perfect contact the electricity jumping from one to the other would cause a spark and if combustible dust was present might start a fire. The substance of his thought is that this defective lightning arrester was a condition affording one ground; that the second ground inside the mill which caused the fire was through some of the machinery in the mill and the high tension current passing through this machinery was likely to arc or cause heat. This idea seems to have caught the Court. But the whole theory vanishes in the face of the evidence and the Court's finding that there was no leak through the transformer. Kimmel's logic is right if his hypothesis had been right, but his hypothesis was wrong. The Court's finding of fact that the transformer was in perfect

working order and therefore an effectual circuit breaker, destroys the Court's conclusion that the lightning arrester was a connecting link in the circuit. There could have been no circuit through a sound transformer. Expert Kimmel assumed something which was not a fact. The Court overlooked his own finding that Kimmel's assumption had no basis in the evidence.

Mr. Clingerman, an engineer of high standing, holding a responsible position with one of the largest electrical engineering organizations in the United States, testified:

> "I should say that if the fire was an electrical fire, it probably would have happened whether or not the lightning arresters were there or not, and it would make no difference whether the lightning arrester was in the sort of order that Mr. Utter described it, or in its present order. In other words, the condition of that lightning arrester, in my opinion, does not enter into consideration at all, as to whether it was an electrical fire or otherwise. I don't think it has any probable bearing on the cause of the fire." (R. pp. 124, 125.)

Mr. Dow, chief electrical engineer of the Montana Power Company, the largest electrical operator in the central west, testified that the condition of the lightning arrester described by Mr. Utter was not a probable cause of the fire. (R. p. 138.)

As we have shown, the two experts called by the Mill Company, Kimmel and Utter, connected

the disordered condition of the lightning arrester, if such disorder existed, as a contributing cause of the fire only in case the transformer was out of order. It having been shown beyond a reasonable doubt, and it having been found by the Court, that the transformer was not out of order, their testimony ceases to have any weight because it is based upon a hypothetical ground which had no basis in fact. It irresistably follows that there is no testimony in the record tending to show that the lightning arrester was even a contributing cause of the fire. The fire, therefore, was either not electrical in origin or if electrical in origin, the cause is to be attributed solely to some accident occurring within the lighting circuit installed and maintained by the Mill Company.

The Court has found that the installation inside the mill was so defective that it was condemned by the fire underwriters' inspector. The Court says:

> "Within the mill the instrumentalities were plaintiff's. A year before the fire they had been condemned by the insurance underwriters, and they were still in process of uncompleted change at odd times by plaintiff's planerman and men supervised by him. It's a resistless inference that the system within the mill was a fire hazard, because of which plaintiff was without insurance at the time of the fire." (R. pp. 147, 148.)

This finding is supported by the testimony of the planerman Stiles. (R. p. 49.)

It is stated that it requires two grounds to make a circuit. In electrical language the word ground does not mean earth. It means a base through which the current may pass from the positive to the negative wire. In alternating current each wire becomes alternatingly positive and negative. In a lighting circuit, therefore, unless there are two grounds there is no current of electricity. The wires are dead. The potential energy, which upon the establishment of a circuit (an electrical conductor connecting the two wires) starts the flow of a current, is in the secondary or low side of the transformer. The electrical force present on the high side of the transformer by induction produces current on the low side. Electrical current is the result of force. A generator produces the flow of electrical current as a result of the force generated by steam or water power. On the secondary side of the transformer the current may be said to be generated by the force of the electrical current on the primary or high side of the transformer. When a circuit is established either by connecting the two wires of the lighting circuit directly together, which is called a dead short circuit, or by connecting them through the intermediate means of some high resistant material, the potential inductive force in the transformer becomes operative and a current flows through the wires—in the case of direct current going out through one wire and back through the other, and in the

case of alternating current passing in one direction momentarily out through one wire and back through the other and then in the opposite direction. A familiar illustration of two grounds in a lighting circuit is the ordinary electric lamp. When the lamps are all turned off there is no current. There is no conducting substance between the wires through which a current can move. When the light switch is closed one of the electric wires leading to the lamp is connected with the high resistant thread within the glass globe and the other end of this thread is connected with the other wire. A current is thus established through the high resistant thread whose temperature is raised to a white heat and light results. This is the normal action of a lighting circuit.

Enlarging the illustration, let us suppose that an intentional ground has been established from one of these light wires at the transformer, as the Mill Company's experts contend the proper practice requires. This ground wire leading to the earth under normal conditions would be simply a dead end for the reason that the other wire of the lighting circuit would not have any electrical connection with it and without a circuit there could be no current. Its only function would be to take care of any leak of current through a disordered transformer, carrying that current to the ground which would afford a medium for carrying the current back on to the wires on the high side through

another ground on that side. The normal function of such a ground at the transformer, according to all the testimony, is simply to take care of an accident resulting in the breaking down of the transformer, and in that contingency it is a safety device, but as there was no breakdown in the transformer in this case if such a ground had been present it would have been without function. The Court has found that such a ground at the transformer would have increased the fire hazard. This finding of the Court is right and is supported by the testimony of Mr. Clingerman. There was, therefore, no negligence in the failure to provide this ground.

To guard against short circuiting through metal conduits the fire underwriters have specified that the conduits must be connected with the earth by grounds. The probability of shorts through the tubes is suggested by the existence of the rule laid down by the underwriters. Their large experience in the investigation of fires led their engineers to provide reasonable precautionary measures. The Mill Company in this case had not provided the precautions imposed by the rule and good practice.

The District Court found that the failure of the Mill Company to ground its conduits was negligence. If the fire was electrical, that negligence was a probable proximate cause.

If, for the sake of argument, we concede that the lightning arrester was in bad order there is

absolutely no proof tending to show when it was disordered. Stiles says from its appearance it had suffered a fall or jar throwing the upper cylinders in contact with each other. The evidences of electrical action were blistering and discoloration of the metallic cylinders, but all the experts agree that this would not have influenced the normal functioning of the apparatus. If the cylinders were displaced through a fall or jar, when did such fall or jar occur? About a month elapsed between the fire and the examination made by Stiles and Utter. In some way the cylinders got back to their normal position before they were taken down by the Mill Company's employes. According to Kimmel, these arresters are not inspected more than once a year and that usually in the spring-time before the lightning season. Anyone acquainted with the Rocky Mountain country where this accident occurred, knows that frequent electrical storms occur between spring and winter. It was not electricity that destroyed the functioning of this instrument. The fall or jarring of a lightning arrester situated in a case fastened up ten feet or more on a pole is not the kind of an accident a prudent man would anticipate, therefore there was no negligence in failing to discover its condition, if it was out of order at the time of the fire. But there is absolutely no evidence that it was out of order at that time. The whole plant was working normally.

The case of *San Juan Lighting Company vs. Requena*, 224 U. S. 89, cited by the District Judge in support of his conclusions, does not appear to us to be in point. In that case the proof was clear that the light wires which entered the deceased's house were charged by the high voltage current through disorder in the converters by means of which the current was reduced from 2200 volts to 110. A converter does not act on the same principle as a transformer. Where a converter is used there is a continuous current through the converter reduced in pressure by means of parallel or multiple wires. A converter performs the same functions as a transformer but in a different way. In that case the converter failed, causing an overload of the light wires. The Mill Company tried to come within that case by assuming a disordered transformer. In this they failed. In that case the accident could not have happened without an over-load of high voltage current. In this case there is no evidence that the light wires became subjected to more than normal current, which might cause a fire through two defects in the light wiring.

Another distinction between the two cases is that in the San Juan case it was affirmatively shown that the inspection was negligently performed, while in the case at bar there is no evidence of negligent inspection. The presumption is that the Power Company did its duty and carefully inspected these lightning arresters at proper times.

The fact that the lightning arrester one month after this fire, during which month the premises were virtually abandoned, showed that it had suffered some kind of a jar does not impute negligent inspection. To so hold would carry the doctrine of *res ipsa loquitur* far beyond its application in the San Juan case or any other case of which we have knowledge.

The judgment of the District Court involves some kind of a connection through the ground, a distance of about three hundred feet, between the supposed defective lighting arrester and the disordered wires inside the mill. There is no support in the record for this assumption. The circuit to which the lightning arrester was connected is independent from the lighting circuit. A current leaking through the lightning arrester would find its way back on to its own system of circulation. That system of circulation was the line between the transformers at the Jordan mill and the transformers at Columbia Falls where the current is stepped down from the main primary 35,000 volt line to the 2200 volt line. A lightning arrester with its cylinders tightly jammed would operate in the same way as a solid wire and would be a dead ground. If the cylinders were only partially jammed we would have a partial ground, but the difference is one only of degree. A ground would not affect the working of the apparatus or disorder the current on these 2200 volt wires unless a

current should be established through a second ground. This current might be established by contact of one of the wires with a tree as explained by Mr. Kimmel, or it might be established through a defective transformer and an accidental ground in the mill. But as Utter says, this last hypothesis involves a defective transformer and as the transformer was not defective the hypothesis has no basis. If the current circulated through the defective lightning arrester, thence through the earth to a tree and back to the wires, it could have no influence in causing a fire in the mill. The diagram on the page following this brief as an appendix illustrates why unbroken insulation between the primary and secondary circuits negatives any possible agency of the lightning arrester in causing a fire.

The District Court has cited in support of the judgment, notwithstanding contributory negligence of the Mill Company, the case of *Le Roy Fiber Company vs. Chicago, Milwaukee & St. Paul Railway*, 232 U. S. 340. The case is clearly distinguishable from the one at bar. In that case a burning cinder was thrown from a locomotive on to a stack of flax straw on the private premises of the owner of the straw. The confessed agency causing the fire was the defective condition of the locomotive stack. The question was whether the owner of the straw could be defeated from recovery because he placed the stack in such proximity to

the railroad that it would have been safe with normal operation of the engine. The Court held that the defendant was not to be defeated from recovery by his failure to anticipate the negligence of the railroad company and that he had a right to stack his straw within a safe distance under conditions of proper operation of the railroad. In that case the negligence of the railroad was the proximate cause of the fire and it was held that the owner of the stack was not negligent in failing to anticipate the negligence of the railroad company. The case, properly analyzed, does not present a question of contributory negligence at all. It simply holds that the owner of the stack was not negligent and that, therefore, the loss was wholly the result of the negligence of the railroad company. The opinion indicates that a different result would have been reached if the straw stack had been placed so close to the track that it was liable to be burned with the engine in normal condition.

In the case at bar, in its most extreme view, the fire was caused by the negligent conditions within the mill, co-operating with the negligent condition of the lightning arrester. We can find no testimony to support this inference but for the sake of the argument let us concede its possibility. The Judge starts with the assumption that one accidental ground existed through negligent construction in the mill, but:

> "The plaintiff's defective instrumentalities would not set fire until two grounds occurred in the mill. The probabilities are two to one in favor of the theory that the arrester operating with one ground in the mill, as it would, is the cause of the fire." (R. pp. 148, 149.)

To measure the relative probability of different suppositions which may account for a fire, the origin and cause of which is unknown, by numerical proportions appears to us to be carrying speculation to the limit. But the Judge has fallen into a mathematical error. He starts with the assumption that immediately before the fire there was one accidental ground of the light wires for which the Mill Company was responsible. From this viewpoint he casts his eye for a second ground which will complete a circuit and make the flow of current possible. He finds the defective lightning arrester between which and the accidental ground in the mill there is an earth connection, but his circuit is not yet complete. It is broken at the transformer. To complete the circuit he must find two additional grounds which will bridge the insulation imposed by the transformer. In order to complete a circuit this second ground must in some way be connected with the light circuit, necessitating two accidental grounds in the light circuit. Before a current can flow through that circuit to the primary wires a second ground in the primary circuit must exist—in all four grounds, three in

addition to the arrester. Probabilities are reversed.

The reasoning of the Court is condemned by the Supreme Court of the United States in *Patton vs. Texas & Pacific Railway Co.*, 179 U. S. 658. While that is a case involving the injury of an employe, the rule as to the burden of proof would not be different in a case like this where there is no such relation. The burden is on the plaintiff to make out his case by a fair preponderance of the evidence.

> "It is not sufficient for the employe to show that the employer may have been guilty of negligence. The evidence must point to the fact that he was, and where the testimony leaves the matter uncertain and shows that any one of a half dozen things may have brought about the injury, for some of which the employer is responsible and for some of which he is not, it is not for the jury to guess between these half dozen causes and find that the negligence of the employer was the real cause when there is no satisfactory foundation in the testimony for that conclusion. If the employe is unable to adduce sufficient evidence to show negligence on the part of the employer, it is one of the many cases in which the plaintiff fails in his testimony." (pp. 663, 664.)

The law will not sustain a decision based on remote inferences.

Bank vs. Stewart, 114 U. S. 224.

Shaw vs. New Year Gold Mines Co., 31 Mont. 138;

Andre vs. Anaconda Copper Mining Co., 47 Mont. 554.

But for the sake of argument let us again take the most extreme view and concede that the current which caused this fire passed through a negligently contructed lightning arrester, negligently maintained and negligently inspected, thence along or through the ground to the saw mill, and thence through an accidental conductor to the negligently installed wiring, and thence by some unknown conductor through two more accidental grounds to the primary wires, completing the circuit, has the Mill Company a right of recovery? A more perfect case of contributory negligence can not be imagined. The damage is the result of the contemporaneous co-ordinating act of two negligent parties. Without the negligence of both the damage could not have occurred. An analogy is the ordinary collision case where both parties violate the rules of the road.

This was apparently conceded by the trial Court but he says the defendant did not plead contributory negligence and therefore cannot avail itself of the fact that its negligence would not have caused the fire if the plaintiff by active participation had not joined in the negligent act. The complaint in this case charges that the fire was

caused wholly by the acts of the defendant and without any fault on its part. The defendant denies both of these allegations and thereby makes an issue. We concede that ordinarily contributory negligence must be affirmatively alleged and proved, but when the plaintiff has tendered the issue by alleging that it was without fault, and that issue is made up by a denial, it would seem unnecessary to repeat the allegation. The criticism of the answer is of form not substance. The plea of contributory negligence is not like the plea of minority, or the statute of limitations, or the statute of frauds, which rest upon privilege to be taken advantage of or not taken advantage of as the case may be. The matter of pleading merely involves the burden of proof and it is the uniform practice that where the plaintiff has proved contributory negligence the defendant can rely upon that proof and the case will be dismissed.

In the case of *Melzner vs. Raven Copper Co.*, 47 Mont., 351, the Supreme Court says:

> "Now, as before the passage of the Act, if the employe was guilty of contributory negligence, that is a defensive fact to be asserted and shown by the defending employer, unless it appears from plaintiff's own pleading or *proof*." (Italics ours.)
>
> "It is a rule now well established in this state, that the defense of contributory negligence, in order to be available to the defendant, must be specifically pleaded unless such contributory negligence appears from

the allegations of the complaint or unless the plaintiff's own case raises a presumption of contributory negligence."

Birsch vs. Citizens Electric Co,. 36 Montana, 574; 93 Pac. 940.

To the same effect:

Brown vs. Oregon R. & Nav. Co., 41 Wash., 692.

This case quotes with approval from *Bunnell vs. Rio Grande R. Co.*, 13 Utah, 314:

"Generally, contributory negligence is a matter of defense, and must be alleged and proven by the defendant; but where the testimony on the part of the plaintiff, who seeks to recover damages for injuries resulting from negligence, shows conclusively that his own negligence or want of ordinary care was the proximate cause of the injury, he will not be permitted to recover, even though the answer contains no averment of contributory negligence."

Where due care of the plaintiff is alleged in the complaint a general denial raises the issue of contributory negligence.

3 Foster's Federal Practice, par. 454.

The Court says the Mill Company created a fire hazard by turning loose a wild current of electricity, but says that the Power Company also turned loose a wild current and the two in some way not suggested, found a connection and travel-

ed over a completed circuit. Both suppositions impute negligence of the plaintiff. Legally, it makes no difference whether that negligence was the whole cause or a contributing cause.

With Jordan's story of seeing the transformer on fire out of the case the inference of an electrical fire is remote and has no basis except in the defective condition of the wiring in the mill and that it was under the care of a man unskilled in the technical trade he was working at.

Tramps on a stormy cold night are not likely to deny themselves the shelter of an empty building containing stoves and plenty of cut fuel out of consideration of locked doors or windows which may have been unlocked. The strong northeasterly wind may have carried cinders from the stack of Great Northern train No. 3 in its westward course near the mill. Unexplained fires are constantly occurring.

The doctrine of *res ipsa loquitur* is not a part of the law of negligence in the Federal Courts or in Montana. Only by a sequence of facts established with reasonable certainty the judicial mind travels from cause to effect. It is not enough that a supposition is consistent with what happened. There must be a connecting link established by probative evidence.

Finally we submit that the cause of this fire is wholly unexplained, the plaintiff having failed to show that it originated in a burning or disorder-

ed transformer. If the fire was of electrical origin it was caused by no fault of the defendant. The most probable cause of the fire, if of electrical origin, was the disordered condition of the Mill Company's own lighting system. If any electrical instrument installed and maintained by the Power Company was defective it could not have been a proximate cause of the fire without the contributing negligence of the Mill Company.

The judgment should be reversed and the case remanded with an order to dismiss.

Respectfully submitted,

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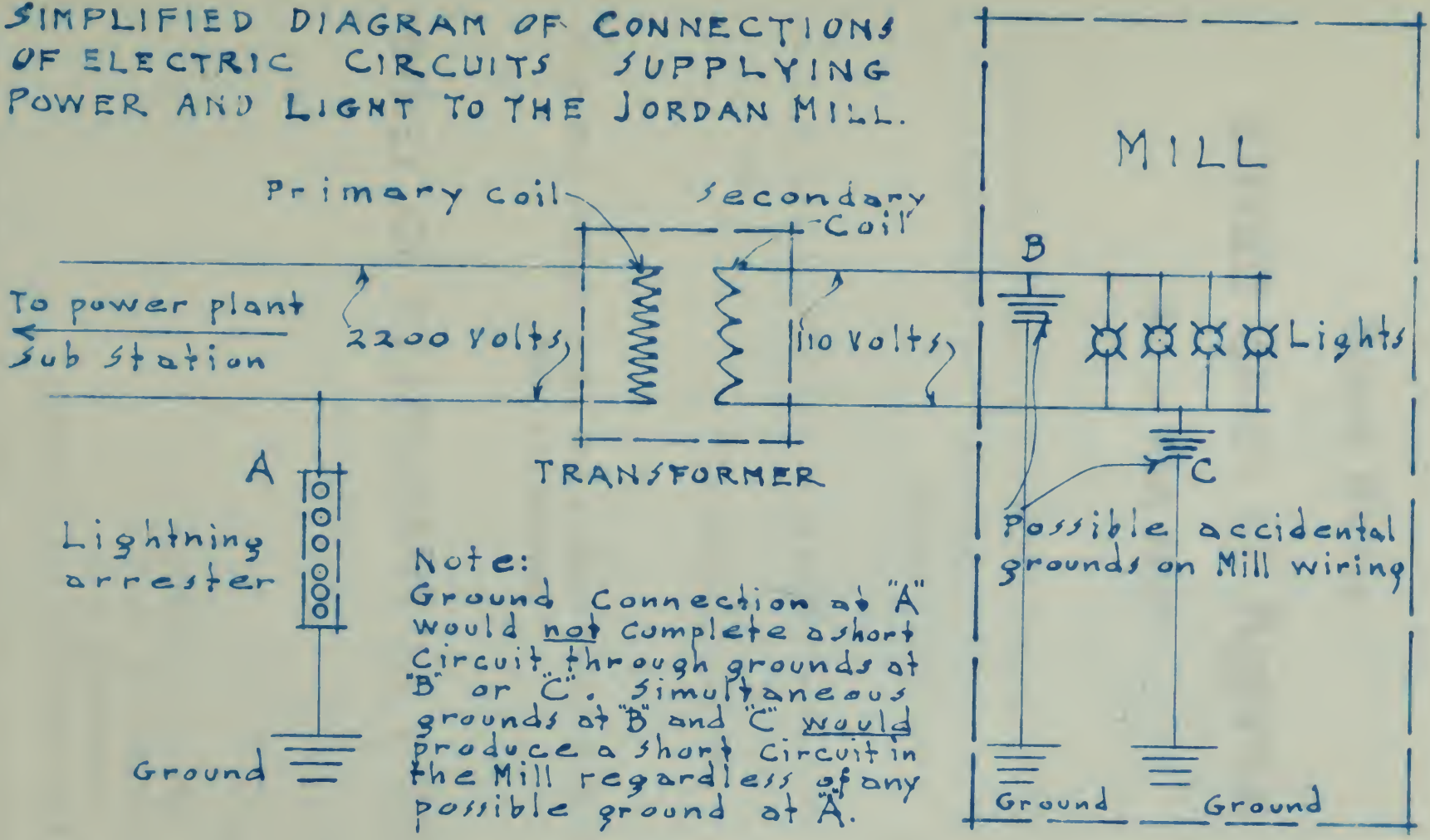
SIMPLIFIED DIAGRAM OF CONNECTIONS OF ELECTRIC CIRCUITS SUPPLYING POWER AND LIGHT TO THE JORDAN MILL.



Note:
Ground Connection at "A" would <u>not</u> complete a short Circuit through grounds at "B" or "C". Simultaneous grounds at "B" and "C" <u>would</u> produce a short Circuit in the Mill regardless of any possible ground at "A".